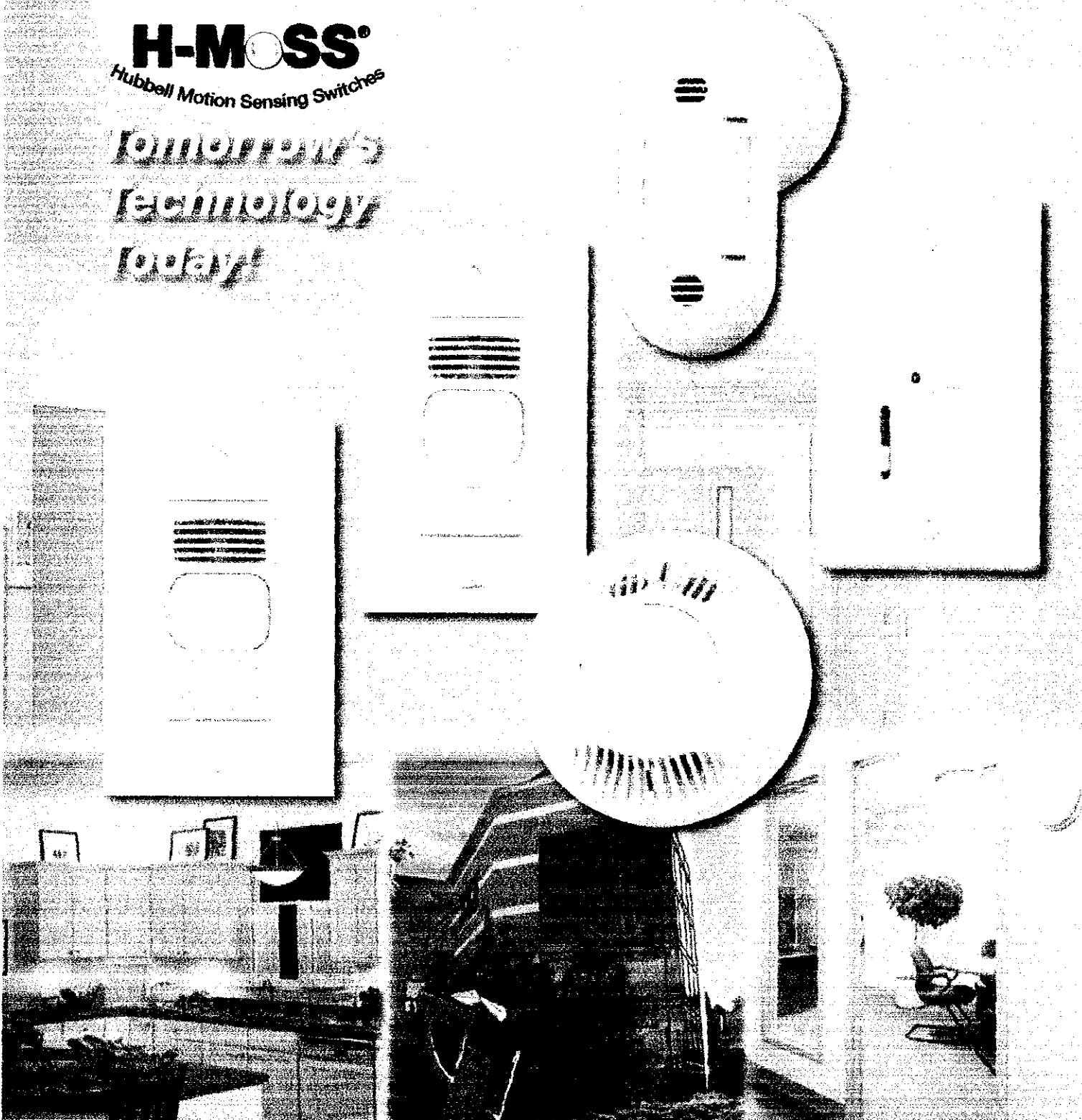


**H-MOSS<sup>®</sup>**  
Hubbell Motion Sensing Switches

**Tomorrow's  
Technology  
Today!**



*Adaptive Technology • Dual Technology  
Ultrasonic • Passive Infrared*



[www.hubbell.com](http://www.hubbell.com)



**H-MOSS<sup>®</sup> Occupancy Sensors** feature the latest in technological advances.

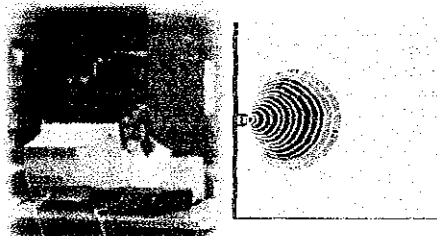
### *Adaptive Technology*

Adaptive Technology is a Hubbell breakthrough that delivers benefits to the building owner and occupants. The building owner gets reduced energy costs, fewer adjustments and less maintenance. The building occupant experiences fewer false-offs, disturbances and lower energy costs.

Adaptive technology sensors use microprocessor-based technology which makes all the decisions for setting adjustments. Internal software constantly monitors the controlled area and automatically adjusts the sensitivity and timer based on environmental history. This means that instead of manually adjusting the sensor for seasonal changes, modified airflow, and furniture layout or occupancy pattern changes, the sensor will automatically adjust itself. These automatic adjustments will eliminate the need for multiple adjustments by maintenance, personnel or outside contractors.

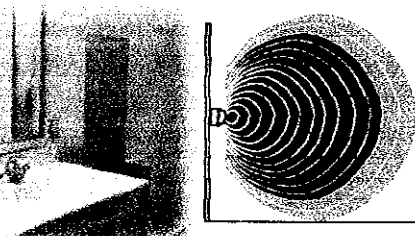
Hubbell offers adaptive technology throughout its product offering (wall switches, ceiling and wall mount sensors) in conjunction with dual technology (ultrasonic and passive infrared), ultrasonic, and passive infrared products.

### *Dual Technology*



Dual technology occupancy sensors use both passive infrared and ultrasonic technologies for maximum reliability. These sensors also minimize the risk of false triggering (lights coming on when the space is unoccupied). Both ultrasonic (US) and passive infrared (PIR) technologies must detect occupancy to turn lighting on, while continued detection by only one technology will keep lighting on. The dual technology sensors are the best performing sensor for most applications.

### *Ultrasonic (US)*



Ultrasonic technology senses occupancy by bouncing ultrasonic sound waves (32kHz - 45kHz) off objects in a space and detecting a frequency shift between the emitted and reflected sound waves. Movement by a person or object within the space causes a shift in frequency, which is interpreted as occupancy. Ultrasonic occupancy sensors are good at detecting minor motion (e.g. typing, reading) and do not require an unobstructed line-of-sight, thus making them suitable for applications such as an office with cubicles or a restroom with stalls.

### *Passive Infrared (PIR)*



Passive Infrared (PIR) technology senses occupancy by detecting the difference between heat emitted from the human body and the background space. PIR sensors require an unobstructed line-of-sight for detection. These sensors utilize a segmented lens, which divides the coverage area into zones. Movement between these zones is interpreted as occupancy. PIR sensors are good at detecting major motion (e.g. walking) and work best in small, enclosed spaces with high levels of occupant movement.

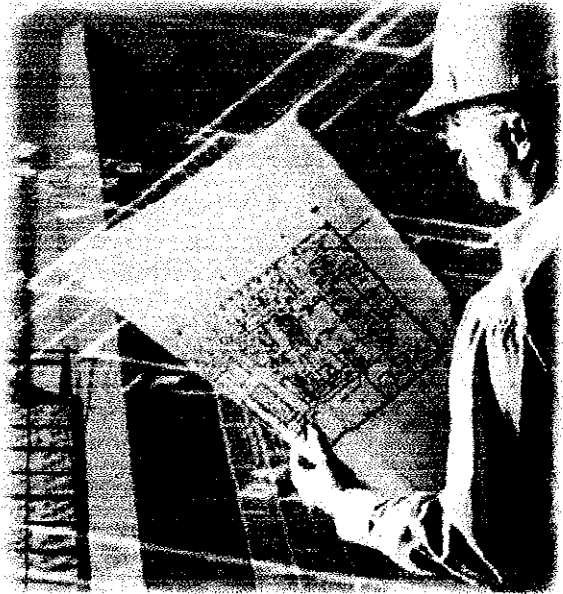


## *Reduce Energy Consumption and Meet Federal and State Standards and Guidelines*

Reduction of energy consumption at all levels: local, state and national is critical. Today's buildings, both commercial and residential - new and renovated - must follow new state and federal standards and codes which call for energy efficiency throughout a facility.

### *LEED*

LEED (Leadership in Energy and Environmental Design) which is sponsored by the U.S. Green Building Council (USBC) has created a rating system to define what constitutes a green building by establishing common standards of measurement, and promoting integrated and whole building design. This certification applies to both new and renovated commercial buildings. Points are awarded by category and there are four levels of certification- certified, silver, gold and platinum.



**H-MOSS, Hubbell Motion Sensor Switches** offer a large array of occupancy sensors, which can be utilized to help increase energy efficiency in the following categories:

### **LEED Credit Categories**

**Sustainable Sites- SS**  
Light pollution reduction

**Energy and Atmosphere- EA**  
Optimize energy performance

**Indoor Environment Quality- EQ**  
Controllability of systems, lighting

**Innovation & Design Process- ID**  
Innovation in design



## *ASHRAE/IESNA 90.1 Standard*

Among the requirements in this standard is that a building of 5,000 sq. ft. or more, except for lighting operated 24 hours per day, must incorporate automatic control devices to turn off all lighting.

## *IECC 2003 Lighting Control Provision*

The International Energy Conservation Code (IECC) which has been adopted by some states, affects new construction, additions and alterations for all commercial buildings, including residential structures with four or more stories above grade. It requires an automatic shutoff of all lighting for buildings larger than 5,000 sq. ft. with occupancy sensors as one way to achieve this goal.

## *California Energy Commission (CEC) Title 24 Program*

California's Title 24 Program sets up some of the most stringent standards and regulations in the country to reduce energy consumption in both commercial and residential structures.

### **Some of the key provisions are:**

#### **Multi-level lighting control**

Any enclosed space 100 sq. ft. or larger which has a connected lighting load that exceeds 0.8 watts per sq. ft. and has more than one light source (luminaire) shall be controlled so that the load for lights may be reduced by a minimum of 50%.

#### **Area controls**

Each area enclosed by ceiling height partitions must have an independent switching or control device- occupancy sensor or manual switch.

#### **Automatic shut-off controls**

For every floor, all indoor lighting must have a separate automatic control, capable of automatically shutting off the lighting.

#### **Residential buildings**

In 2005, Title 24 simplified and expanded the standard to include use of high efficacy luminaires, manual-on occupancy sensors, fluorescent lights or dimmers in most rooms of the home such as bedrooms, bathroom, garage, living room, hallway, and utility room.

Hubbell offers many models of occupancy, vacancy and dimmers (all CEC Title 24 compliant) that will enable builders, contractors and homeowners to meet these new requirements.



Wiring Device-Kellems

# H-MOSS Wall Switches

## Featuring Adaptive Technology

All H-MOSS Wall Switches with Adaptive Technology featured below have the following standard features:

- Adaptive technology - "Install and forget" operation
- All digital sensing technology
- Dual 120/277V AC operation
- Auto or manual "On" operating modes
- No minimum load requirements
- Hard lens (dual technology, passive infrared)
- Zero arc point switching
- Built in photocell with manual super saver mode for daylight harvesting
- Two relays for two level switching or dual load control (AD, AP AU1277x2, 2N series)
- C-UL US

### Adaptive Technology, Dual (Ultrasonic and Passive Infrared)

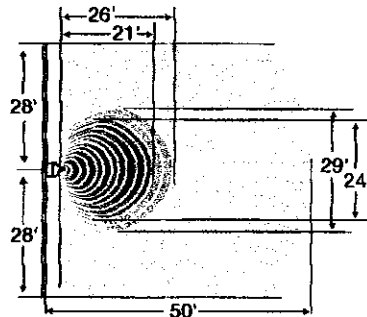
50/60Hz, 1000 sq. ft. coverage with photocell, 800W Incandescent, 1000W Fluorescent at 120V AC, 1800W Fluorescent at 277V AC



Circuit	Button	Color	Catalog Numbers
Single	1 Button for manual/auto control	Ivory White	<b>AD1277I1</b> <b>AD1277W1</b>
Single	Auto control with no button	Ivory White	<b>AD1277I1N</b> <b>AD1277W1N</b>
Dual	2 Buttons for manual/auto control	Ivory White	<b>AD1277I2</b> <b>AD1277W2</b>
Dual	Auto control with no button	Ivory White	<b>AD1277I2N</b> <b>AD1277W2N</b>

Sensors are available in three special order colors. To order special order colors, replace "I or W" with the following: LA (Light Almond), GY (Gray) or BK (Black). Special order colors have minimum ordering requirements and minimum lead times. Please call Customer Service for further information. Wallplates are sold separately.

- Ultrasonic Major Motion
- Ultrasonic Minor Motion
- Passive Infrared



AD1277W1



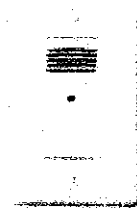
AD1277W1N  
AD1277W2N



AD1277W2



AU1277W1



AU1277W1N  
AU1277W2N



AU1277W2

### Adaptive Technology, Ultrasonic

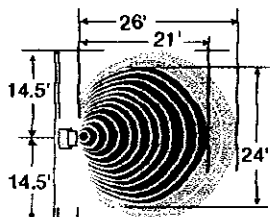
50/60Hz, 400 sq. ft. coverage with photocell, 800W Incandescent, 1000W Fluorescent at 120V AC, 1800W Fluorescent at 277V AC



Circuit	Button	Color	Catalog Numbers
Single	1 Button for manual/auto control	Ivory White	<b>AU1277I1</b> <b>AU1277W1</b>
Single	Auto control with no button	Ivory White	<b>AU1277I1N</b> <b>AU1277W1N</b>
Dual	2 Buttons for manual/auto control	Ivory White	<b>AU1277I2</b> <b>AU1277W2</b>
Dual	Auto control with no button	Ivory White	<b>AU1277I2N</b> <b>AU1277W2N</b>

Sensors are available in three special order colors. To order special order colors, replace "I or W" with the following: LA (Light Almond), GY (Gray) or BK (Black). Special order colors have minimum ordering requirements and minimum lead times. Please call Customer Service for further information. Wallplates are sold separately.

- Ultrasonic Major Motion
- Ultrasonic Minor Motion





## Adaptive Technology, Passive Infrared

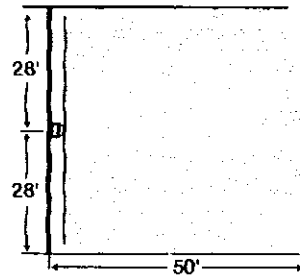
50/60Hz, 1000 sq. ft. coverage with photocell, 800W Incandescent, 1000W Fluorescent at 120V AC, 1800W Fluorescent at 277V AC



Circuit	Button	Color	Catalog Numbers
Single	1 Button for manual/auto control	Ivory	<b>AP1277I1</b>
		White	<b>AP1277W1</b>
Single	Auto control with no button	Ivory	<b>AP1277I1N</b>
		White	<b>AP1277W1N</b>
Dual	2 Buttons for manual/auto control	Ivory	<b>AP1277I2</b>
		White	<b>AP1277W2</b>
Dual	Auto control with no button	Ivory	<b>AP1277I2N</b>
		White	<b>AP1277W2N</b>

Sensors are available in three special order colors. To order special order colors, replace "I or W" with the following: LA (Light Almond), GY (Gray) or BK (Black). Special order colors have minimum ordering requirements and minimum lead times. Please call Customer Service for further information. Wallplates are sold separately.

### Passive Infrared



AP1277W1

AP1277W1N  
AP1277W2N

AP1277W2

## Adaptive Technology Wall Mount Sensors

- Adaptive Technology - "Install and forget" operation
- Swivel mounting bracket included for wall or ceiling mounting
- All digital sensing technology
- Photocell for daylight harvesting and relay interface with auxiliary systems such as HVAC (WRP and HBRP models)
- 24V DC, 33MA



### Dual (Ultrasonic and Passive Infrared)

Description	Coverage	Color	Catalog Numbers
32kHz, with photocell and isolated relay	1600 sq. ft.	White	<b>ATD1600WRP</b>
32kHz	1600 sq. ft.	White	<b>ATD1600W</b>

### Passive Infrared



Description	Coverage	Color	Catalog Numbers
With photocell and isolated relay	1600 sq. ft.	White	<b>ATP1600WRP</b>
	1600 sq. ft.	White	<b>ATP1600W</b>
For aisle and high bay applications, with photocell and isolated relay	120 linear ft.	White	<b>ATP120HBRP</b>
For aisle and high bay applications	120 linear ft.	White	<b>ATP120HB</b>

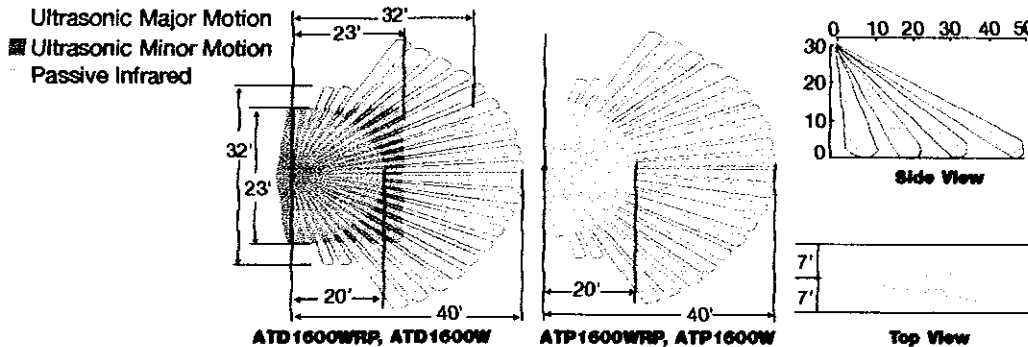
Note: All wall mount sensors must use a CU series control unit. See page 11 for details.

ATD1600WRP  
ATD1600W

ATP1600WRP  
ATP1600W  
ATP120HBRP  
ATP120HB






Wiring Device-Kellems

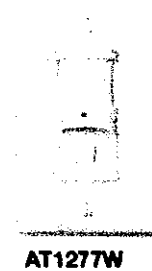


# H. Moss Wall Switches Passive Infrared Sensors

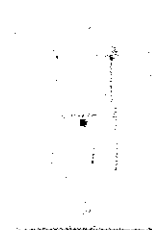
## Adaptive Technology, Passive Infrared

- Adaptive technology - "Install and forget" operation
- Passive infrared technology
- Dual 120/277V AC operation
- Heavy duty relay (AT1277)
- Audible alarm before sensor turns lights off (AT1277)
- 1200 sq. ft. coverage
- Built in photocell for daylight harvesting
- Nylon wallplate included

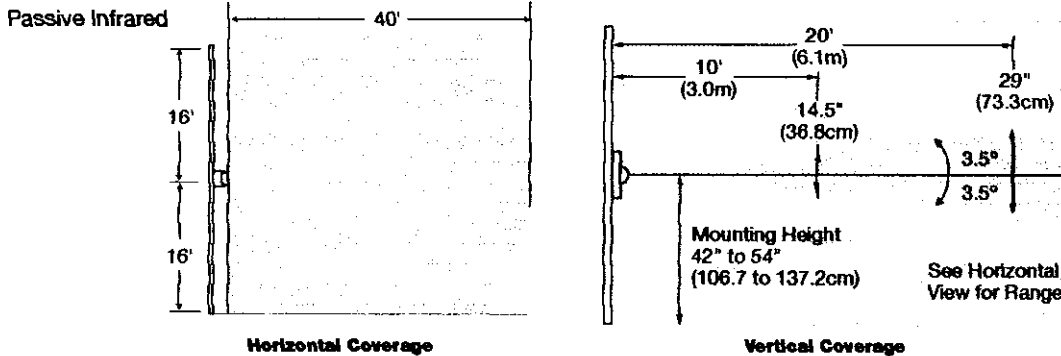
Description	120V AC	277V AC	Color	Catalog Numbers
One Button	1800W Incandescent	4155W Fluorescent	Ivory White	<b>AT1277I</b> <b>AT1277W</b>  
One Button	800W Incandescent 800W Fluorescent	1200W Fluorescent	Ivory White Gray	<b>ATP1277I</b> <b>ATP1277W</b>  <b>UL LISTED</b> <b>ATP1277GY</b>



AT1277W










ATP1277W



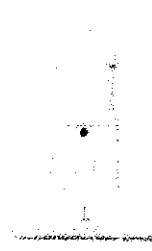
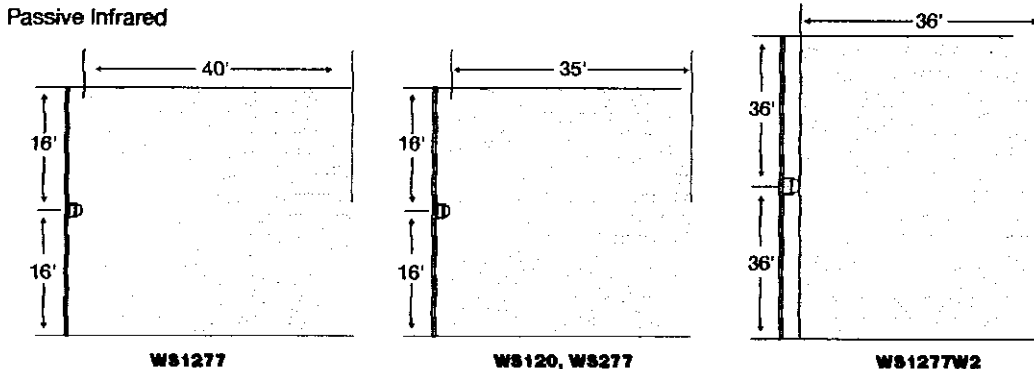
## Passive Infrared Wall Switches

- Passive infrared technology
- Manual adjustment time delay (WS1277 - 20 sec. to 30 min.) (WS120/WS277 - 30 sec. to 30 min.)
- Photocell (WS1277I, WS1277W)
- Dual level switching from one or two circuits (WS1277W2)
- Nylon wallplate included (except WS1277W2)

Description	Coverage	120V AC	277V AC	Color	Catalog Numbers
One button 120/277V AC	1200 sq. ft.	800W	1200W	Ivory White	<b>WS1277I</b> <b>WS1277W</b>  <b>UL LISTED</b>
One button, 120V AC	900 sq. ft.	800W Incandescent 1000W Fluorescent	N/A	Ivory White	<b>WS120I</b> <b>WS120W</b>  
One button, 277V AC	900 sq. ft.	N/A	1800W Fluorescent	Ivory White	<b>WS277I</b> <b>WS277W</b>  
Double pole switch, 120/277V AC	1000 sq. ft.	600W Incandescent* 1000W Fluorescent*	1800W Fluorescent	White	<b>WS1277W2</b>  

Two-gang adapter wallplate for **WS1277W2** to mount to a two-gang box **WSAP**

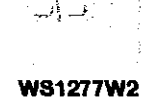
\*per circuit



WS1277W



WS120W



WS1277W2





*Residential Occupancy Sensors - Passive Infrared*

- Passive infrared technology
- Photocell equipped for daylight harvesting
- Auto-on, auto-off
- Delayed off adjustment from 30 seconds to 30 minutes
- Patent pending "alert to off" feature dims lights prior to going off (RMS101&121)
- Wallplate included
- C-UL US



Description	Coverage	120V AC		Color	Catalog Numbers		
		500W	277V AC N/A		Standard	Nightlight	
Single pole switch with button, 150° view	800 sq. ft.	500W Incandescent	N/A	Ivory White Almond Light Almond	RMS101I RMS101W RMS101AL RMS101LA	RMS101LI RMS101LW RMS101LAL RMS101LLA	RMS101W
Single pole switch with dimming, 150° view	800 sq. ft.	500W Incandescent	N/A	Ivory White Almond Light Almond	RMS121I RMS121W RMS121AL RMS121LA	RMS121LI RMS121LW RMS121LAL RMS121LLA	RMS121W
Heavy duty switch, 180° view	900 sq. ft.	800W 1000W Incandescent Fluorescent	1800W Fluorescent	Ivory White Almond	RMS141I RMS141W RMS141AL	- - -	RMS121ILW

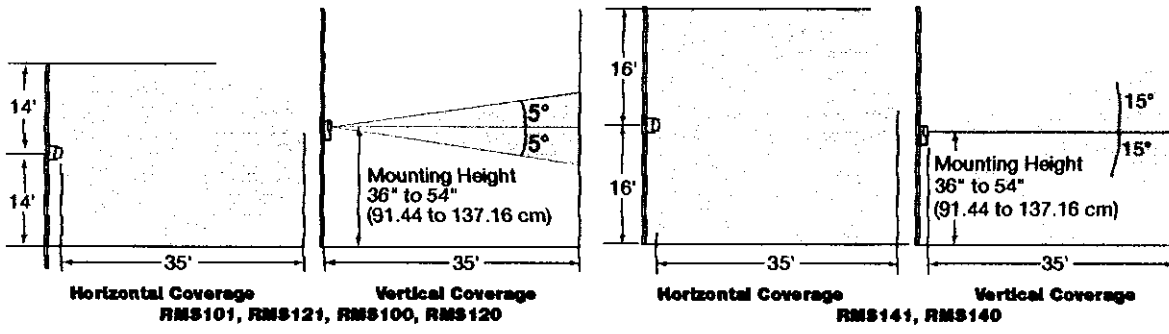
*Vacancy Sensors - Passive Infrared - CA Title 24 Compliant*

- Passive infrared technology
- Manual-on, auto-off
- Patent pending "alert to off" feature dims lights prior to going off (RMS100 & 120)
- Delayed off, adjustment from 30 seconds to 30 minutes
- Wallplate included
- C-UL US



Description	Coverage	120V AC		Color	Catalog Numbers		
		500W	277V AC N/A		Standard	Nightlight	
Single pole switch with button, 150° view	800 sq. ft.	500W Incandescent	N/A	Ivory White Almond Light Almond	RMS100I RMS100W RMS100AL RMS100LA	RMS100LI RMS100LW RMS100LAL RMS100LLA	RMS100W
Single pole switch with dimming, 150° view	800 sq. ft.	500W Incandescent	N/A	Ivory White Almond Light Almond	RMS120I RMS120W RMS120AL RMS120LA	RMS120LI RMS120LW RMS120LAL RMS120LLA	RMS120W
Heavy duty switch, 180° view	900 sq. ft.	800W 1000W Incandescent Fluorescent	1800W Fluorescent	Ivory White Almond	RMS140I RMS140W RMS140AL	- - -	RMS120ILW

**Passive Infrared**



Wiring Device-Kellems

# H-MOSS Ceiling Sensors

## Featuring Adaptive Technology

All H-MOSS ceiling sensors with Adaptive Technology contain the following standard features:

- Adaptive Technology- "Install and forget"
- All digital sensing technology
- Photocell for daylight harvesting and relay to interface with auxiliary systems such as HVAC (CRP models)
- Non-volatile memory- learned and adjusted settings retained after power outage
- 24V DC, 33mA
- 32kHz (ATD/ATU500C & CRP - 400kHz)
- Mounting base included with sensor

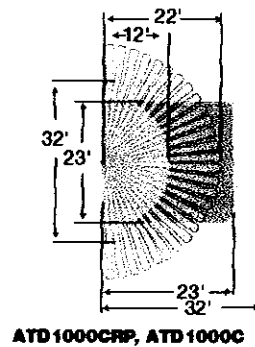
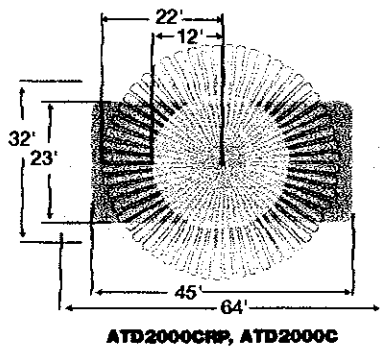
### Adaptive Technology, Dual (Ultrasonic and Passive Infrared)

Combines the excellent minor motion detection of ultrasonic with the outstanding passive infrared (PIR) long-range major motion detection

Coverage	Color	Catalog Numbers
2000 sq. ft. with photocell and isolated relay	White	<b>ATD2000CRP</b>
2000 sq. ft.	White	<b>ATD2000C</b>
1000 sq. ft. with photocell and isolated relay	White	<b>ATD1000CRP</b>
1000 sq. ft.	White	<b>ATD1000C</b>
500 sq. ft. with photocell and isolated relay	White	<b>ATD500CRP</b>
500 sq. ft.	White	<b>ATD500C</b>

Note: All ATD ceiling sensors must use a CU series control unit. See page 11 for details.

- Passive Infrared
- Ultrasonic Major
- Ultrasonic Minor



**ATD2000CRP**  
**ATD2000C**

**ATD1000CRP**  
**ATD1000C**  
**ATD500CRP**  
**ATD500C**

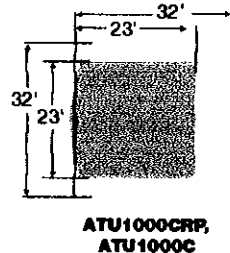
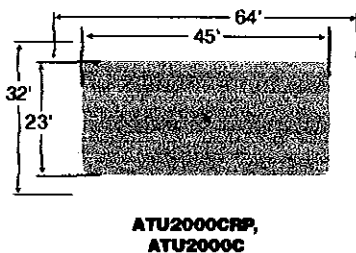
### Adaptive Technology, Ultrasonic

Excellent minor motion detection

Coverage	Color	Catalog Numbers
2000 sq. ft. with photocell and isolated relay	White	<b>ATU2000CRP</b>
2000 sq. ft.	White	<b>ATU2000C</b>
1000 sq. ft. with photocell and isolated relay	White	<b>ATU1000CRP</b>
1000 sq. ft.	White	<b>ATU1000C</b>
500 sq. ft. with photocell and isolated relay	White	<b>ATU500CRP</b>
500 sq. ft.	White	<b>ATU500C</b>

Note: All ATU ceiling sensors must use a CU series control unit. See page 11 for details.

- Ultrasonic Major
- Ultrasonic Minor



**ATU2000CRP**  
**ATU2000C**

**ATU1000CRP**  
**ATU1000C**  
**ATU500CRP**  
**ATU500C**



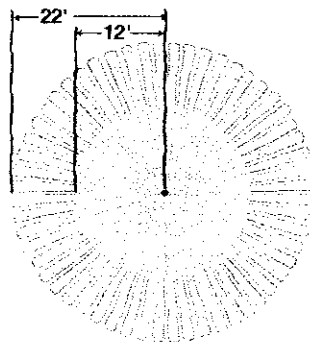
*Adaptive Technology, Passive Infrared*

Outstanding long range major motion detection

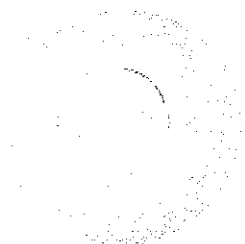
Description	Coverage	Color	Catalog Numbers
Wide view lens	1500 sq. ft. with photocell and isolated relay	White	<b>ATP1500CRP</b>
Wide view lens	1500 sq. ft.	White	<b>ATP1500C</b>
High density lens	450 sq. ft. with photocell and isolated relay	White	<b>ATP600CRP</b>
High density lens	450 sq. ft.	White	<b>ATP600C</b>

Note: All ATP ceiling sensors must use a CU Series control unit. See below for details.

Passive Infrared



**ATP1500CRP, ATP1500C**

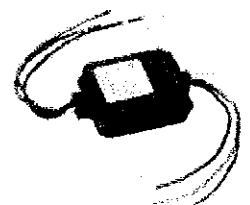


**ATP1500CRP  
ATP1500C  
ATP600CRP  
ATP600C**

*Control Units*

Hubbell CU series control units provide a 24V DC power supply for 1 to 3 sensors or sensor/Add-A-Relay combinations. The CU300A provides a 24V DC power supply for 1 to 4 sensors or sensor/Add-A-Relay combinations. The control units contain an internal relay for the control of an external lighting load. All control units are plenum rated.

Description	Catalog Numbers
120/277V AC, 50/60 Hz for use with ATD, ATU and ATP series ceiling sensors and wall mount sensors	<b>CU300A</b>
347V AC, 60 Hz, for use with ATD, ATU and ATP series ceiling and wall mount sensors	<b>CU347A</b>

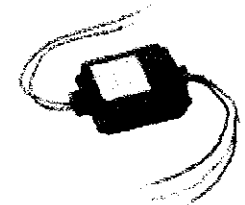


**CU347A, CU300A**

*Add-A-Relay*

Hubbell AAR Add-A-Relay contains an internal relay for control of an external lighting load. The AAR requires a 24V DC power supply from the Hubbell CU series control unit. The AAR is typically used when: 1. It is desired to switch more than one circuit when occupancy is sensed. 2. The lighting load exceeds the maximum rating of the control unit.

Description	Catalog Number
For use with CU series control units and Hubbell ATD, ATU and ATP series ceiling and wall mount sensors	<b>AAR</b>



**AAR**

*Digital Timer Wall Switch*

Description	120V AC	277V AC	Color	Catalog Number
Dip switch enabled preset intervals - 5, 15 or 30 minutes - 1, 3, 6, 9 or 12 hours	800W	1200W	White	<b>DT1277W</b>
Includes an on/off momentary push button switch feature				



**DT1277W**

All Hubbell H-MOSS® Occupancy Sensors are covered by a 5 year limited warranty.

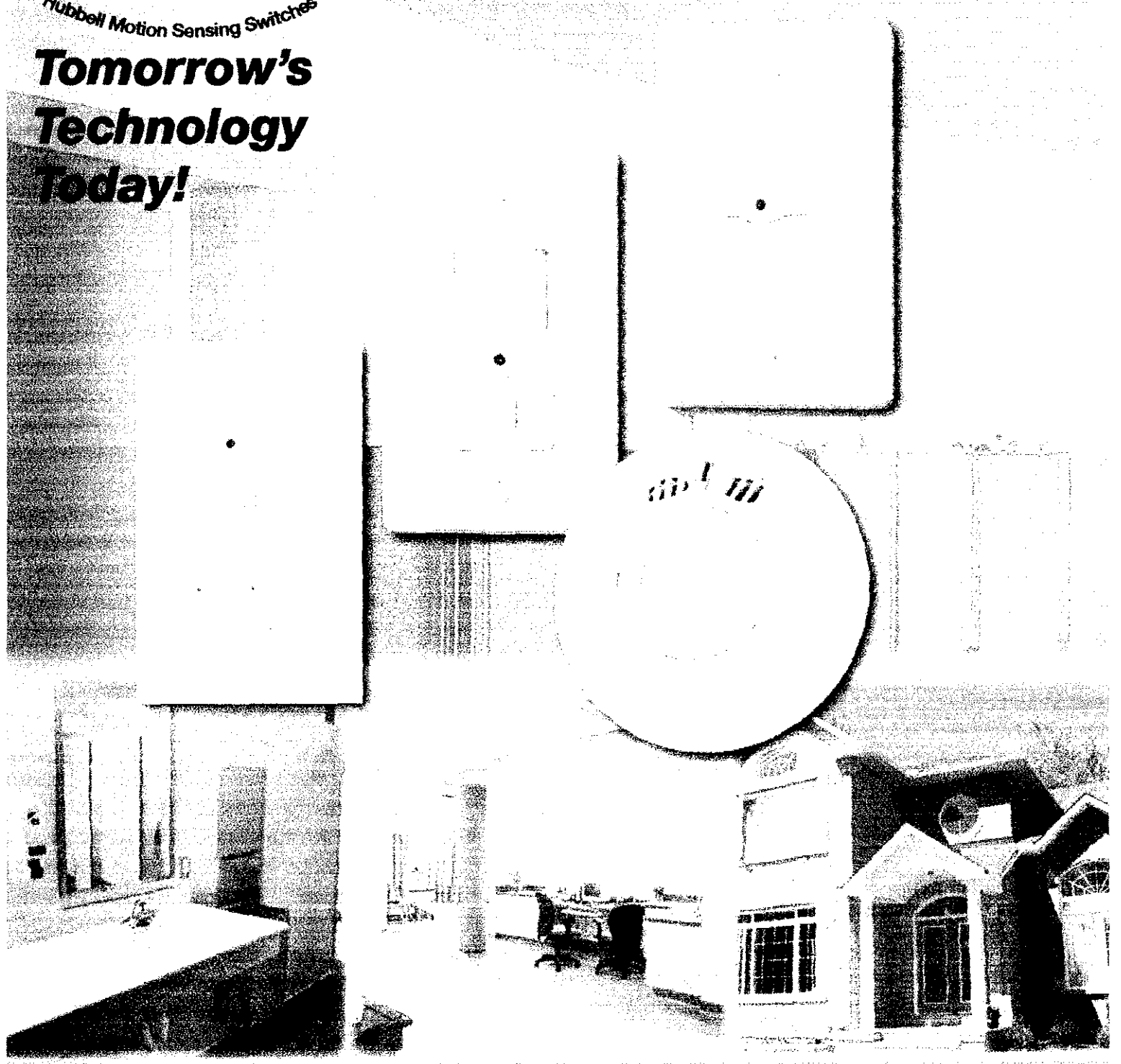


Wiring Device-Kellems

GREENWISE

**H-MOSS**  
Hubbell Motion Sensing Switches

**Tomorrow's  
Technology  
Today!**



## OCCUPANCY SENSORS TO BE ADDED TO STATE CONTRACT

### Hubbell Building Automation, Inc.

Part #	Color	Description	Price
LHUSS1	Ivory	LightHawk Ultrasonic Wall Switch Sensor with IntellADAPT, Single Circuit, One Button, 120/277VAC, 400 Sq. Ft., Photocell	46.15
LHMTS1	Ivory	LightHawk Multi-Technology Wall Switch Sensor with IntellADAPT, Single Circuit, One Button, 120/277VAC, 1000 Sq. Ft. Photocell	72.15
OMNIDT2000	White	OMNI Passive Infrared & Ultrasonic Ceiling Sensor with IntellADAPT, 2000 Sq. Ft.	79.88
OMNIUS2000	White	OMNI Ultrasonic Ceiling Sensor with IntellADAPT, 2000 Sq. Ft.	73.58
OMNIIR	White	OMNI Passive Infrared Ceiling Sensor with IntellADAPT, 450 Sq. Ft.	44.00
UVPP		Universal Voltage Power Pack, 120-277VAC	16.83

### Pass & Seymour

Part #	Color	Description	Price
WSP2001		Wall Mount Occupancy Sensor IV	31.00
OS300SI		Pir Occ Switch Sensor IV	40.00
CS1200		Pir Ceiling Sensor 1200SF	51.00
CSU1100		Ultra Ceiling Sensor 1100SF	68.00
CSD1000		Dual Tech Ceiling Sensor 1000SF	82.00
PWP2120		Power Pack 120V 24VDC 150MA	16.00
PWP2277		Power Pack 277V 24VDC 150MA	16.00

### Hubbell Wiring Device

Part #	Color	Description	Price
--------	-------	-------------	-------

AD127711	Wall switch occ sensor dual Tech 120/277v	99.09
AD127711N	Wall switch occ sensor dual Tech 120/277v	99.09
WS12771	Wall switch occ sensor PIR 120/277v	33.28
ATD2000C	ceiling mounted dual tech occ sensor 2000 sq ft coverage	109.96
ATD1000C	ceiling mounted dual tech occ sensor 2000 sq ft coverage	96.13
ATD500C	ceiling mounted dual tech occ sensor 2000 sq ft coverage	78.46
ATD1600W	ceiling mounted dual tech occ sensor 2000 sq ft coverage	79.49
CU120A	Power Pack 120V 24VDC 150MA	23.08
CU277A	Power Pack 277V 24VDC 150MA	23.08

### **Lutron**

<b>Part #</b>	<b>Color</b>	<b>Description</b>	<b>Price</b>
LRF2-OCRB-P-WH		Wireless ceiling mounted remote Sensor	70.00
MRF-6ANS-120		Wall Box Controller for Wireless sensor 120v	65.00
MRF-6ANS-277		Wall Box Controller for Wireless sensor 277v	105.00

Pass & Seymour

Elegant

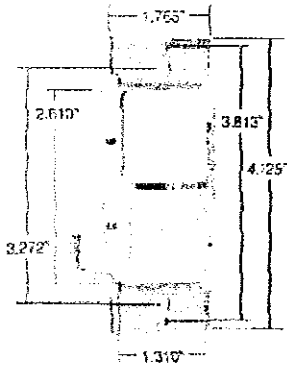
# Occupancy & Vacancy Sensors & Timers

## Commercial Occupancy Sensors

Wall Box Passive Infrared (PIR)

Occupancy & Vacancy Sensors & Timers

Commercial Occupancy Sensors



WSP200LA

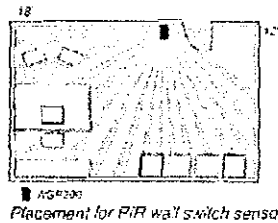
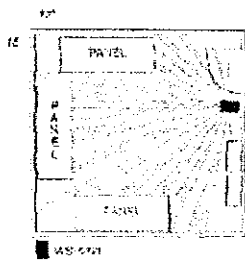
### Features

- Detection Signature Analysis provides high immunity to RFI and EMI.
- Compact, decorator design replaces existing wall switch.
- Integrated light level sensor works from 10 to 150 footcandles.
- Compatible with all electronic and magnetic ballasts, PL lamp ballasts, compact fluorescent.
- Adjustable time delay of 30 seconds to 30 minutes.
- Dual 120/277VAC operation.
- 30% to 60% energy savings.
- Positive detection indicator.
- No minimum load requirement.
- Adjustable sensitivity from 20% to 100%.
- Patented voltage drop protection.
- Patented Zero Crossing Circuitry.
- 180° coverage of up to 900 sq. ft.
- cULus listed.
- 5-year warranty.

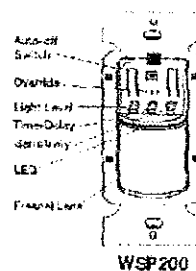
Catalog Number	Description	Voltage	Load	Color
<b>Automatic Wall Switches - 3 Wire Technology</b>				
WSP200I	PIR Occupancy Sensor	120/277VAC; 60 Hz	800W Max. at 120V 1200W Max. at 277V	Ivory
WSP200W				White
WSP200GRY				Gray
WSP200LA				Light Almond

### Planning a Layout

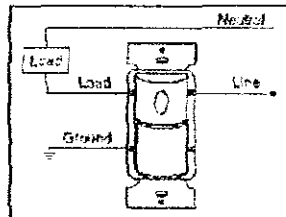
The WSP200's 2-level lens provides superior coverage of desktop level by allowing the sensor to detect vertical as well as horizontal motion. Coverage shown is for walking motion. Under optimum conditions with a high level of activity and with no barriers or obstacles, coverage can reach a maximum of 900 square feet. Under a typical, desktop level of activity when mounted at 4 feet, coverage is 300 square feet.



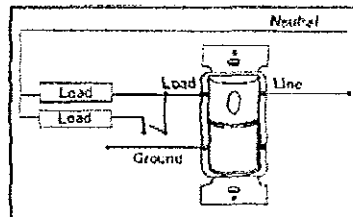
Placement for PIR wall switch sensor



Factory settings: 30 min. time delay, maximum light level and sensitivity



Single Level Lighting  
WSP200



Manual Bi-level Lighting  
WSP200

Technical Specifications on Page U-127.

All devices listed on this page conform to NEMA WD-1 and WD-6.

# Occupancy & Vacancy Sensors & Timers

## Commercial Occupancy/ Vacancy Sensors

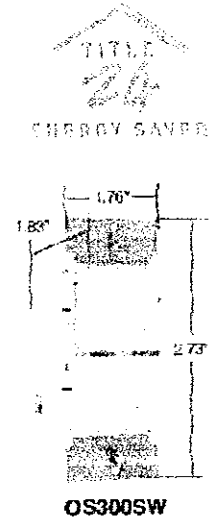
Wall Box Passive Infrared (PIR)

Pass & Seymour

Legrand

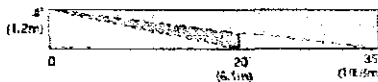
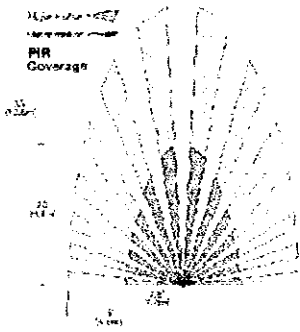
### Features

- Detection signature processing eliminates false triggers and provides immunity to RFI and EMI.
- Zero-crossing for long relay life.
- Vandal-resistant lens combines precise coverage with durability.
- Choice of Auto-ON or Manual-ON operation.
- Auto adjustable time delays: automatic, fixed (5, 10, 15, 20, 25 or 30 minutes), walk-through, test-mode.
- Selectable time delay automatically adjusts for maximum savings.
- Walk-through mode turns lights off 3 minutes after the area is initially occupied – ideal for brief visits such as mail delivery.
- Selectable test mode allows quick and easy adjustments.
- Selectable audible alert for impending shutoff.
- In AUTO-ON mode, if the sensor is manually turned OFF, AUTO-ON will not enable until no motion is detected for 5 minutes. This prevents the light from turning ON when it was intended they remain OFF. Ideal for presentations.
- LED indicates occupancy detection.
- Built-in light level sensing with simple, one-step setup.
- Override mode allows sensor to operate as a service switch in the unlikely event of a failure.
- NEMA WD 7 guideline utilized for coverage testing.
- Sensitivity adjustment: PIR (high/low).
- Coverage: 180°, up to 1050 sq. ft., major motion 35' x 30'; minor motion 20' x 15'.
- cULus listed.
- 5-year warranty.
- Load: Incandescent, fluorescent, compact fluorescent (CFL), magnetic low-voltage (MLV) and electronic low-voltage (ELV), 1/6 hp



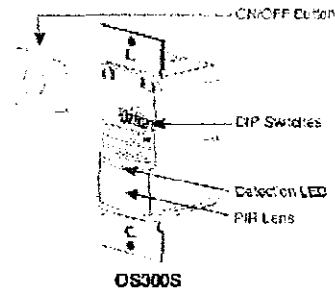
Catalog Number	Description	Rating	Load	Occupant Warning Before OFF	Selectable Auto/Man. ON	Color
<b>Single-Pole Occupancy/Vacancy Sensors</b>						
OS300SI	Self-adaptive design remembers ON/OFF cycles	120/230/277VAC; 50/60 Hz.	All	Yes	Yes	Ivory
OS300SW		⊕ 120VAC, 0-800 W ballast or tungsten, 1/6 hp.		Yes	Yes	White
OS300SGRY		⊕ 230/277VAC, 0-1200 W ballast		Yes	Yes	Gray
OS300SLA				Yes	Yes	Lt. Almond

### Coverage



For best performance, Pass & Seymour/LeGrand recommends using this sensor in spaces no larger than 15' x 20'.

### Product Controls



### DIP Switch Settings

DIP Switch #1	1	2	3
Time Delay	3	3	3
Smartest Test	4	4	4
5 minutes	5	5	5
10 minutes	6	6	6
15 minutes	7	7	7
20 minutes	8	8	8
25 minutes	9	9	9
30 minutes	10	10	10
⊕ override	11	11	11

⊕ Factory Settings    ⊕ = ON    ⊖ = OFF

DIP Switch #4	4
Walk Through	4
Disabled	4
Enabled	4

DIP Switch #5	5
On Mode	5
Auto On	5
Manual On	5

DIP Switch #6	6
High	6
Low 50%	6

DIP Switch #7	7
Audible Alerts	7
Disabled	7
Enabled	7

DIP Switch #8	8
Visible Alerts	8
Disabled	8
Enabled	8

On Mode: Time Delay, Audible Alerts

FACTORY PRESETS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Walk Through, Visible Alerts, Sensitivity

Technical Specifications on Page U-127.

All devices listed on this page conform to NEMA WD-1 and WD-6.

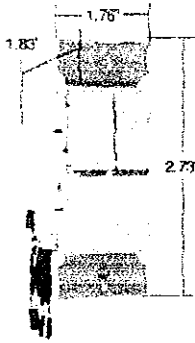
Occupancy & Vacancy Sensors & Timers

Commercial Occupancy/Vacancy Sensors



Pass & Seymour

Legend



OSR300SW

## Occupancy & Vacancy Sensors & Timers Commercial Occupancy/ Vacancy Sensors

Bi-Level Wall Box Passive Infrared (PIR)

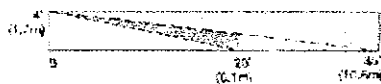
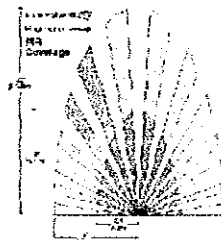
### Features

- Detection signature processing eliminates false triggers and provides immunity to RFI and EMI.
- Zero-crossing for long relay life.
- Vandal-resistant lens combines precise coverage with durability.
- Choice of Auto-ON or Manual-ON operation, selectable for each relay.
- Auto adjustable time delays: automatic, fixed (5, 10, 15, 20, 25 or 30 minutes), walk-through, test-mode.
- Selectable time delay automatically adjusts for maximum savings.
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds.
- Selectable test mode allows quick and easy adjustments.
- Selectable audible alert for impending shutoff.
- In AUTO-ON mode, if the sensor is manually turned OFF, AUTO-ON will not enable until no motion is detected for 5 minutes. This prevents the light from turning ON when it was intended they remain OFF. Ideal for presentations.
- LED indicates occupancy detection.
- Built-in light level sensing with simple, one-step setup.
- Override mode allows sensor to operate as a service switch in the unlikely event of a failure.
- NEMA WD 7 guideline utilized for coverage testing.
- Sensitivity adjustment: PIR (high/low).
- Coverage: 180°, up to 1050 sq. ft., major motion 35' x 30'; minor motion 20' x 15'.
- cULus listed.
- 5-year warranty.
- Load: Incandescent, fluorescent, compact fluorescent (CFL), magnetic low-voltage (MLV) and electronic low-voltage (ELV), 1/6 hp.

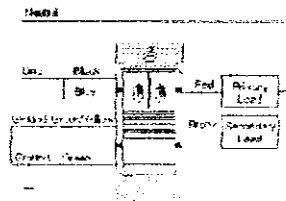
NEW

Catalog Number	Description	Rating	Occupant Warning Load	Selectable Auto/Man. Before OFF	Color
<b>Single-Pole Dual-Relay Occupancy/Vacancy Sensors</b>					
OSR300SI	Operates both circuits of a bi-level lighting system	120/230/277VAC; 50/60 Hz.	All	Yes	Ivory
OSR300SW		@ 120VAC, 0-600 W ballast or tungsten, 1/6 hp.		Yes	White
OSR300SGRY		@ 230/277VAC, 0-1200 W ballast		Yes	Gray
OSR300SLA				Yes	Lt. Almond

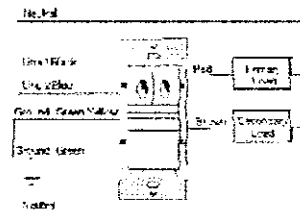
### Coverage



### OSR300S Bi-Level Wiring

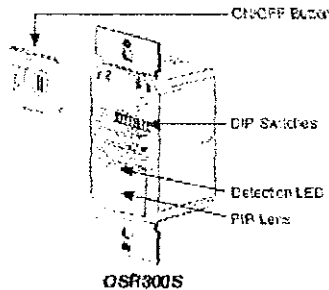


### OSR300S Two Circuit Level Wiring

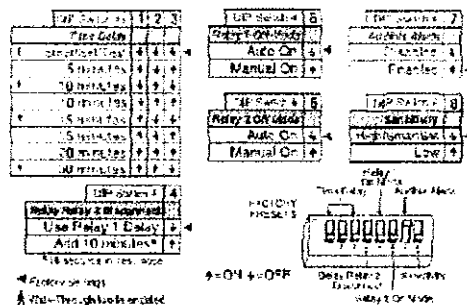


For best performance, Pass & Seymour/LeGrand recommends using this sensor in spaces no larger than 15' x 20'.

### Product Controls



### DIP Switch Settings



Technical Specifications on Page U-127.

All devices listed on this page conform to NEMA WD-1 and WD-6.

Pass & Seymour

Legend

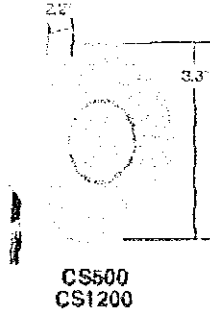
# Occupancy & Vacancy Sensors & Timers

## Commercial Occupancy Sensors

Ceiling Mount Passive Infrared (PIR)

Occupancy & Vacancy Sensors & Timers

Commercial Occupancy Sensors



### Features

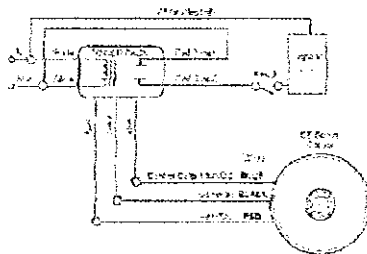
- ASIC technology reduces components and enhances reliability.
- Pulse count processing eliminates false offs without reducing sensitivity.
- Detection signature analysis eliminates false triggers and provides immunity to RFI and EMI.
- Low-profile design ensures a clean and uncluttered ceiling appearance.
- User-adjustable time delay from 15 seconds to 30 minutes by two minute increments.
- Sensitivity is programmed through a DIP switch and has four settings from minimum to maximum.
- Dual-element, temperature compensated pyroelectric sensor.
- Mounting options: ceiling tile or 3.0 inch round mudring.
- Units per power pack: up to 13.
- cULus listed.
- 5-year warranty.

Auto

Catalog Number	Description	Rating	Coverage	Override and Output Disable	Color
<b>Low-Profile Ceiling Mount Sensors</b>					
CS500	PIR Occupancy Sensor	24VDC Input, requires Power Pack 11mA	360°, 500 sq. ft.	No	White
CS1200	PIR Occupancy Sensor		360°, 1200 sq. ft.	No	White

Reference Page M-15 for Power Packs.

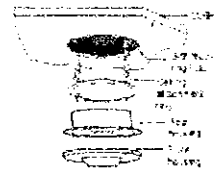
### CS500/CS1200 Wiring



### DIP Switch Settings

DIP Switch #	1	2	3	4	5
Time Delay	ON	ON	ON	ON	ON
15 seconds	●	●	●	●	●
2 minutes	●	●	●	●	●
4 minutes	●	●	●	●	●
8 minutes	●	●	●	●	●
10 minutes	●	●	●	●	●
12 minutes	●	●	●	●	●
14 minutes	●	●	●	●	●
16 minutes	●	●	●	●	●
18 minutes	●	●	●	●	●
20 minutes	●	●	●	●	●
22 minutes	●	●	●	●	●
24 minutes	●	●	●	●	●
26 minutes	●	●	●	●	●
28 minutes	●	●	●	●	●
30 minutes	●	●	●	●	●

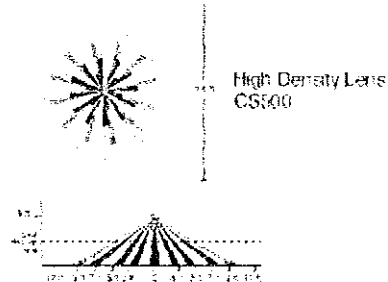
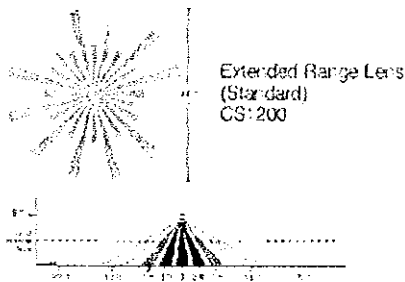
### Mounting - CS1200



DIP Switch #	1	2
Mounting	ON	ON
Maximum	●	●
Maximum High	●	●
Maximum	●	●

● = ON - ● = OFF  
▶ = Factory Presets

### Coverage



Technical Specifications on Page U-130.

All devices listed on this page conform to NEMA WD-1 and WD-6.

# Occupancy & Vacancy Sensors & Timers

## Commercial Occupancy Sensors

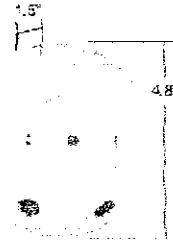
Ultrasonic Ceiling Mount

Pass & Seymour

Legend

**Features**

- Advanced signal processing circuitry helps to eliminate false ONs.
- Utilizes advanced, omni-directional (360°), Doppler technology for reliable occupancy detection.
- Angled transmitter and receiver pairs help optimize sensitivity while eliminating unwanted detection from ceiling air movement.
- Digital DIP switch time delay (15 seconds to 30 minutes).
- LED indicates occupancy detection.
- Reliable solid-state construction.
- Temperature and humidity resistant 32 kHz receivers.
- Mounts to ceiling tiles or box.
- Units per power pack: up to 4.
- cULus listed.
- 5-year warranty



CSU600

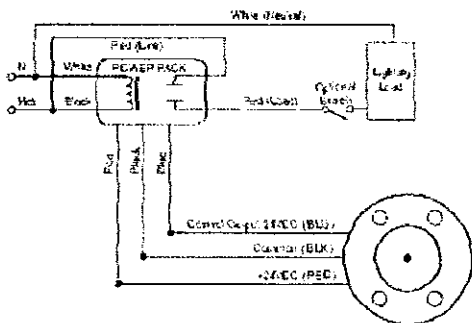


CSU1100  
CSU2200

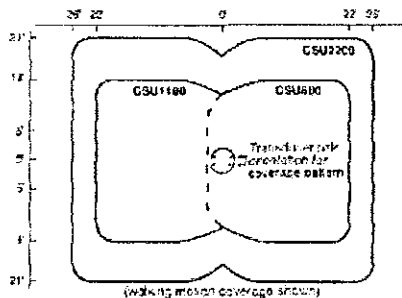
Catalog Number	Description	Rating	Coverage	Override and Output Disable	Color
<b>Ultrasonic Ceiling Mount Sensors</b>					
CSU600	Ultrasonic Occupancy Sensor	24VDC Input, requires Power Pack 27mA	360°, 500 sq. ft. One-sided	Yes	White
CSU1100	Ultrasonic Occupancy Sensor	24VDC Input, requires Power Pack 33mA	360°, 1100 sq. ft. Two-sided	Yes	White
CSU2200	Ultrasonic Occupancy Sensor	24VDC Input, requires Power Pack 30mA	360°, 2200 sq. ft. Two-sided	Yes	White

Reference Page M-15 for Power Packs.

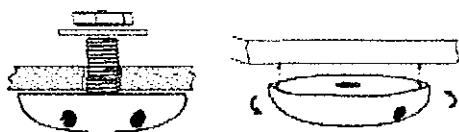
**CSU600/CSU1100/CSU2200 Wiring**



**Coverage**



**Mounting**



Attached to a vibration-free surface. Mount the sensors with the receivers facing the area of coverage. Note: Place 4" away from supply ducts, 6" from horizontal discharge ducts, and 6" from power packs.

**DIP Switch Settings**

●=ON —=OFF	DIP Switch #					
Time Delay	1	2	3	4	5	6
15 seconds	●	-	-	-	-	-
2 minutes	-	●	-	-	-	-
4 minutes	-	-	●	-	-	-
6 minutes	-	-	-	●	-	-
8 minutes	-	-	-	-	●	-
10 minutes	-	-	-	-	-	●
12 minutes	-	-	-	-	●	-
14 minutes	-	-	-	-	-	●
*16 minutes	-	-	-	-	-	●
18 minutes	-	-	-	-	●	-
20 minutes	-	-	-	-	-	●
22 minutes	-	-	-	-	●	-
24 minutes	-	-	-	-	-	●
26 minutes	-	-	-	-	●	-
28 minutes	-	-	-	-	-	●
30 minutes	-	-	-	-	●	-
Output Disable	-	-	-	-	-	●
Override	-	-	-	-	-	●

Technical Specifications on Page U-131.

All devices listed on this page conform to NEMA WD-1 and WD-6.

Occupancy & Vacancy Sensors & Timers

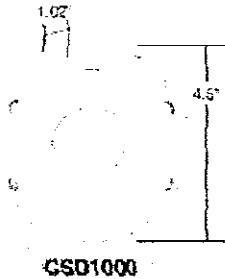
Commercial Occupancy Sensors

CSD1000

Pass & Seymour

Legend

**Occupancy & Vacancy Sensors & Timers**  
**Commercial Occupancy Sensors**  
 Dual Technology Ceiling Mount



CSD1000

**Features**

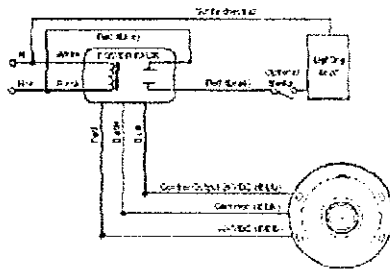
- Advanced control logic based on RISC microcontroller provides:
  - Detection signature processing eliminates false triggers and provides immunity to RFI and EMI.
- Walk-through mode turns lights off three minutes after the area is initially occupied - ideal for brief visits such as mail delivery.
- Simple, one-step setup.
- Ultrasonic diffusion technology spreads coverage to a wider area (patented).
- LEDs indicate occupancy detection.
- Four occupancy logic options give users the ability to customize control to meet application needs.
- Ultrasonic frequency of 40 kHz.
- Time delays: automatic, fixed (5, 10, 15, 20, or 30 minutes), walk-through, test-mode.
- Sensitivity adjustment: reduce sensitivity (for PIR sensitivity); ultrasonic sensitivity is variable with trimpot.
- Multi-level, 360° Fresnel lens for superior occupancy detection.
- Mounting options: ceiling tile; 4 square junction box with double gang mudring.
- Units per power pack: up to 4.
- cULus listed.
- 5-year warranty.

NEW

Catalog Number	Description	Rating	Coverage	Override and Output Disable	Color
<b>Low-Profile Ceiling Mount Sensors</b>					
CSD1000	Dual Technology Occupancy Sensor	24VDC Input, requires Power Pack 35mA	360°, 1000 sq. ft. Two-sided	Yes	White

Reference Page M-15 for Power Packs.

**CSD1000 Wiring**



**DIP Switch Settings**

PIR Sensitivity

Minimum 30%	1
Maximum 100%	0

◀ = Factory Setting  
 • = ON  
 - = OFF

Occupancy Logic	In-Door Occupancy	Maximum Occupancy	Test Trigger	Switch 4
	1	2	3	4
Standard	Both	Either	Either	◀
Option 1	PIR	Either	Either	•
Option 2	PIR	Either	Either	◀
Option 3	Both	Both	Both	•

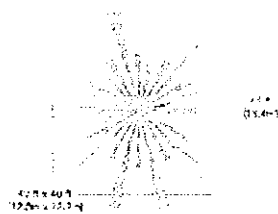
Switch 4

Time Delay	6	5	4	7
15 sec	•	•	•	•
2 min	◀	•	•	•
4 min	•	•	•	•
6 min	◀	•	•	•
8 min	•	•	•	•
10 min	◀	•	•	•
12 min	•	•	•	•
15 min	◀	•	•	•
18 min	•	•	•	•
20 min	◀	•	•	•
22 min	•	•	•	•
24 min	◀	•	•	•
25 min	•	•	•	•
28 min	◀	•	•	•
30 min	•	•	•	•

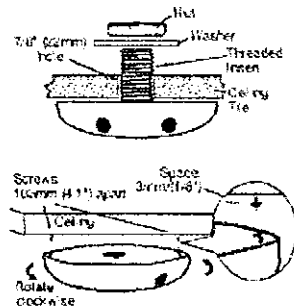
Switch 7

Override	5
Off	•
On	◀

**Coverage**



**Mounting**



Technical Specifications on Page U-132.

All devices listed on this page conform to NEMA WD-1 and WD-6.

# Occupancy & Vacancy Sensors & Timers Power Packs & Add-A-Relay

Pass & Seymour

Legrand

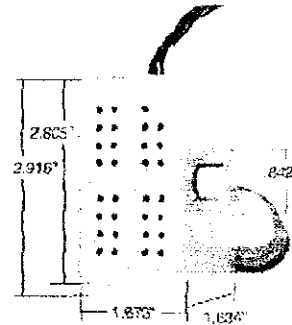
## A cost-effective way to power Pass & Seymour/Legrand® occupancy sensors.

Pass & Seymour/Legrand power packs consist of a transformer and high-current relay in one small unit. In addition to a primary high input, power packs have a secondary output of 24VDC, 100mA which provides operating power to sensors. Upon sensing motion or insufficient light, sensors electrically close an internal circuit and send 24VDC back to the power packs or Add-A-Relays that control lighting systems. Unlike power packs, Add-A-Relay does not have transformer power supply, only an isolated relay.

Power packs can switch a maximum 20 Amps of fluorescent lighting. Both power packs and Add-A-Relay are available for 120 and 277 Volt systems.

### Features

- Essential to ceiling mount sensor systems.
- Self-contained transformer and relay.
- Easy-to-install.
- Teflon-coated wire leads suitable for plenum applications.
- Secondary voltage: 24VDC; Secondary output: 150mA.
- UL-rated 94 V0 plastic enclosure.
- cULus listed.
- 5-year warranty.



PWP2120  
PWP2277  
AR120/277

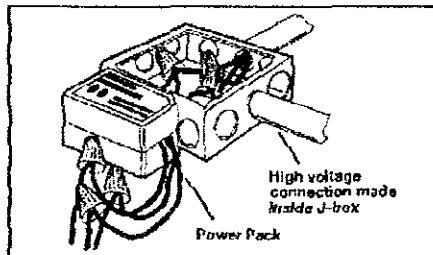
Catalog Number	Description	Input Voltage	Load Ratings (Amps)			Output
			Balast	Incan.	Motor	
<b>Power Packs &amp; Add-A-Relay</b>						
PWP2120	Power Pack	120	20	13	1HP	24VDC; 150mA
PWP2277	Power Pack	277	20	—	1HP	24VDC; 150mA
AR120/277	Add-A-Relay	120/277	20	13	1HP	10

\*Add-A-Relay has a current consumption of 36mA.

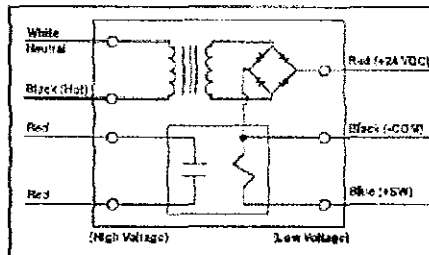
### Installation

Power packs should be installed in accordance with state, local, and national electrical codes. They are designed to attach to electrical enclosures with 1/2 inch knockouts. In plenum ceilings, power packs should be installed in approved electrical enclosures. Most applications require UL listed, 18-22 AWC, 3-conductor, class 2 cable for low-voltage wiring. For plenum rated ceilings use UL listed plenum-approved cables.

#### J-Box Installation

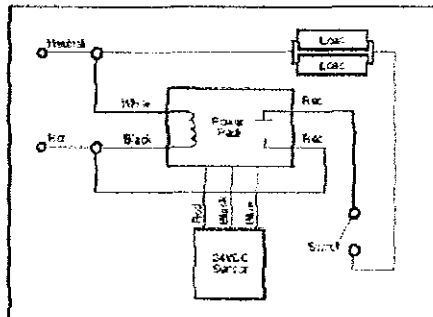


#### Power Pack Schematics

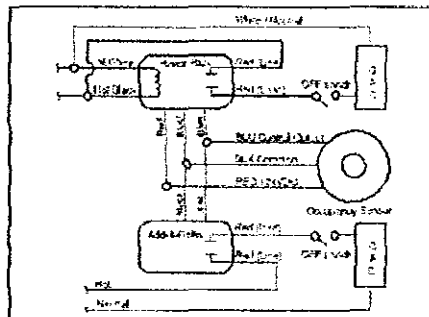


For additional Wiring Diagrams, see Pages U-22 & U-23.

#### Ceiling Sensor with Power Pack



#### Sensor Schematic with Add-A-Relay



Technical Specifications on Page U-133.

All devices listed on this page conform to NEMA WD-1 and WD-6

Occupancy & Vacancy Sensors & Timers

Power Packs & Add-A-Relay